



PTO/SB/21 (02-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

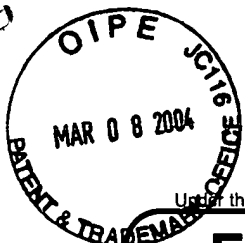
TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/723,533
	Filing Date	11/26/2003
	First Named Inventor	Anandaroop Bhattacharya
	Art Unit	3753
	Examiner Name	Not Yet Assigned
Total Number of Pages in This Submission	Attorney Docket Number	111079-135105

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Copies of 5 IDS References; Return Receipt Postcard
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	Remarks	
<input type="checkbox"/> Response to Missing Parts/Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm or Individual name	SCHWABE, WILLIAMSON & WYATT, P.C.	
Signature		
Date	3/5/04	

CERTIFICATE OF TRANSMISSION/MAILING		
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.		
Typed or printed name	Heather L. Adamson	
Signature		Date 03/05/2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 0.00

Complete if Known

Application Number	10/723,533
Filing Date	11/26/2003
First Named Inventor	Anandaroop Bhattacharya
Examiner Name	Not Yet Assigned
Art Unit	3753
Attorney Docket No.	111079-135105

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☒ None

☒ Deposit Account:

Deposit Account Number: 500393
Deposit Account Name: Schwabe, Williamson et al

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments

☒ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$) 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fee from below		Fee Paid
Total Claims	<input type="text"/>	-20** =	<input type="text"/>	X	<input type="text"/>	= <input type="text"/>
Independent Claims	<input type="text"/>	-3** =	<input type="text"/>	X	<input type="text"/>	= <input type="text"/>
Multiple Dependent					<input type="text"/>	= <input type="text"/>

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 0.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 0.00

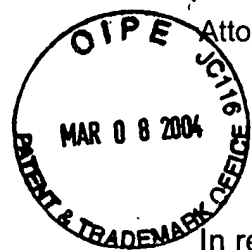
SUBMITTED BY

Name (Print/Type)	Nathan R. Maki	Registration No. (Attorney/Agent)	51,110	Telephone	503-222-9981
Signature	<i>Nathan R. Maki</i>	Date	3/5/04		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Attorney Docket No. 111079-135105

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application for:

Anandaroop Bhattacharya et al.

Application No.: 10/723,533

Filed: 11/26/2003

For: THERMAL MANAGEMENT
DEVICE FOR AN INTEGRATED
CIRCUIT

Examiner: Not Yet Assigned

Art Group: 3753

Confirmation No. 8659

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this date: 03/05/2004

Typed or Printed: Heather L. Adamson

Signature: Heather L. Adamson

Date: 03/05/2004

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. § 1.97(g), the submission of this Information Disclosure Statement (IDS) is not to be construed as a representation that a search has been made, and, pursuant to 37 C.F.R. § 1.97(h), the submission of this IDS is not to be construed as an admission that the information cited in this IDS is material to patentability.

This IDS is being submitted under one or more of the following sections of 37

C.F.R. § 1.97 (as indicated by an "X" to the left of the appropriate paragraph(s)):

 X 37 C.F.R. § 1.97(b). Filed:

- (1) Within three months of a National Application other than a CPA;
- (2) Within three months of entry into National Stage;
- (3) Before mailing of a first Office Action on the merits; or
- (4) Before mailing of a first Office Action after filing an RCE.

 37 C.F.R. § 1.97(c). Filed before the mailing of a Final Office Action, Notice of Allowance, or an action that otherwise closes prosecution.

 And, ONE of the following:

 (1) One statement from 37 C.F.R. § 1.97(e);

 (e)(1) The person signing below certifies that each item of information contained in this IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or

 (e)(2) The person signing below certifies that no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing below after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 1.56(c) more than three months prior to filing this IDS.

OR

 (2) The fee set forth in 37 C.F.R. § 1.17(p).

 A check in the amount of \$180.00 is enclosed.

 37 C.F.R. § 1.97(d). Filed on or before payment of the issue fee.

 And, BOTH of the following:

 (1) one statement from 37 C.F.R. § 1.97(e);

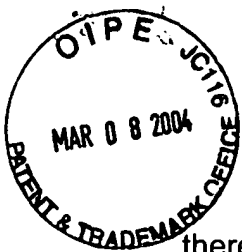
 (e)(1) The person signing below certifies that each item of information contained in this IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or

 (e)(2) The person signing below certifies that no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing below after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 1.56(c) more than three months prior to filing this IDS.

AND

 (2) The fee set forth in 37 C.F.R. § 1.17(p).

 A check in the amount of \$180.00 is enclosed.



Accompanying this IDS is a list of references and a copy of each reference listed therein, EXCEPT copies of references waived under:

(A) one or more of the following sections of 37 C.F.R. § 1.98 (as indicated by an "X" to the left of the appropriate paragraph(s)):

_____ 37 C.F.R. § 1.98(c) as being cumulative (marked with an "*" on the Form PTO-1449).

_____ 37 C.F.R. § 1.98(d) as being previously submitted in parent application
_____/_____, to which the present application claims priority under 35
U.S.C. § 120.

(B) 1273 Off. Gaz. Pat. Office 55 as being submitted with respect to an application filed after June 30, 2003.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393. A Fee Transmittal is enclosed in duplicate for fee processing purposes.

Respectfully submitted,
SCHWABE, WILLIAMSON & WYATT, P.C.

Dated: 3/5/04


by, Nathan R. Maki, Reg. No. 51,110
Attorney for Applicants

Pacwest Center, Suites 1600-1900
1211 SW Fifth Avenue
Portland, Oregon 97204
Telephone: 503-222-9981



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/723,533
Filing Date	11/26/2003
First Named Inventor	Anandaroop Bhattacharya
Art Unit	3753
Examiner Name	Not Yet Assigned
Attorney Docket Number	111079-135105

Sheet	1	of	1
-------	---	----	---

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	1	CALMIDI et al., "Forced Convection in High Porosity Metal Foams," Journal of Heat Transfer, Transactions of the ASME, August 2000, Vol. 122, pp. 557-565	
	2	HUNT et al., "Effects of thermal dispersion on forced convection of fibrous media," Int. J. Heat Mass Transfer, 1988, Vol. 31, No. 2, pp. 301-309	
	3	PHANIKUMAR et al., "Non-Darcy natural convection in high porosity metal foams," International Journal of Heat and Mass Transfer, 2002, 45, pp. 3781-3793	
	4	STUBOS et al., "Network Modelling of Two-Phase Flow in Porous Structures: An Alternative for the Sutdy of Chip Cooling Enhancement," Proceedings of the NATO Advanced Study Institute on Cooling of Electronic Systems, June21-July 2, 1993, pp. 811-824	
	5	THYRUM, "Alleviating Thermal Spreading Resistance in Telecommunications Systems," Therma-Base(TM) Heat Sinks, April 11, 2003, pp. 1-7	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.